REMARKS

Claims 1-12 are presently pending in the application. Claims 1-6 have been amended to more particularly define the invention. Claims 7-12 have been added to assure Applicant the degree of protection to which his invention entitles him.

It is noted that the claim amendments are made only to assure grammatical and idiomatic English and improved form under United States practice, and are not made to distinguish the invention over the prior art or narrow the claims or for any statutory requirements of patentability. Further, Applicant specifically states that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 1-4 and 6 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hayashi, U.S. Patent No. 6,588,014, in view of Kato, et al., U.S. Patent No. 6,504,850 and Yoshida, EP 0 917 365. Claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over Hayashi in view of Kato, et al., and Yoshida, and further in view of that which is well known in the art. These rejections are respectfully traversed.

FORMAL MATTERS

The title has been amended grammatically and to reflect the claimed invention.

The Office Action objects to the Abstract as not complying with United States requirements. The original Abstract has been replaced by a new Abstract which overcomes the objections.

In the flow chart of Figure 2, Step A11 has been amended from a decision block

AMENDMENT TO THE DRAWINGS

Step A11 of the flow chart of Figure 2 has been amended from a decision block having only a "YES" output to a logic step.

The legends within the logic block of step A14 in Figure 2 have been grammatically corrected to read:

OUTPUT DATA AT STATE S:
S_0: SW SIG OFF; AUDIO DATA OFF; ONLY VIDEO DATA
S_1: SW SIG ON; AUDIO DATA OFF; ONLY VIDEO DATA
S_2: SW SIG ON; LOW BIT RATE AUDIO DATA AND VIDEO DATA
S_3: SW SIG ON; ONLY HIGH BIT RATE AUDIO DATA

having only a "YES" output to a logic step. The legends within the logic block of step A14 have been grammatically corrected to read:

OUTPUT DATA AT STATE S:
S_0: SW SIG OFF; AUDIO DATA OFF; ONLY VIDEO DATA
S_1: SW SIG ON; AUDIO DATA OFF; ONLY VIDEO DATA
S_2: SW SIG ON; LOW BIT RATE AUDIO DATA AND VIDEO DATA
S_3: SW SIG ON; ONLY HIGH BIT RATE AUDIO DATA

THE CLAIMED INVENTION

The claimed invention is directed to a data transmission system and method. An exemplary embodiment of the inventive system includes a video data encoder for encoding inputted video data; an audio data encoder for encoding inputted audio data; a video data storage unit for storing the encoded video data; an audio data storage unit for storing the encoded audio data; a multiplexer for multiplexing video data outputted from the video data storage unit and audio data outputted from the audio data storage unit; a multiplexing controller; and an audio signal detector for measuring the audio level of the inputted audio data and generating a data write control signal to control the video data encoder and the audio data encoder, and for generating an audio detected signal to control the multiplexing controller. The multiplexing controller is responsive to the audio detected signal to generate a data read control signal for controlling the video data storage unit and the audio data storage unit, and to generate a data multiplexing control signal for controlling the multiplexer so as to cause the multiplexer to output a selected one of the video data, the audio data, and the multiplexed video and audio data.

An exemplary embodiment of the inventive method includes encoding inputted video

data; encoding inputted audio data; storing the encoded video data; storing the encoded audio data; multiplexing the stored video data and the stored audio data; measuring the audio level of the inputted audio data; generating a data write control signal to control encoding of the inputted video data and the inputted audio data; generating an audio detected signal indicative of the measured audio level; and in response to the audio detected signal, controlling multiplexing of the stored video data and the stored audio data, generating a data read control signal for controlling storing of the encoded video data and the encoded audio data, and generating a data multiplexing control signal for controlling outputting of a selected one of the video data, the audio data, and the multiplexed video and audio data.

THE PRIOR ART REFERENCES

The Hayashi Reference

Hayashi discloses a system and method for digital communication. Hayashi's system includes a video data encoder for encoding inputted video data; an audio data encoder for encoding inputted audio data; a video data storage unit for storing the encoded video data; an audio data storage unit for storing the encoded audio data; a multiplexer for multiplexing video data outputted from said video data storage unit and audio data outputted from said audio data storage unit; and a multiplexing controller which controls the multiplexer. See Hayashi at, for example, column 8, lines 10-20 and Figure 3.

The Kato, et al. Reference

Kato, et al. discloses an encoded signal transmission method and apparatus. Kato's

apparatus includes a video data encoder for encoding inputted video data; an audio data encoder for encoding inputted audio data; a video data storage unit for storing and smoothing the encoded video data; an audio data storage unit for storing and smoothing the encoded audio data.

The Yoshida Reference

Yoshida discloses a video conference data transfer system. Yoshida's system includes a compressor which, *arguendo*, might be considered to be a video data encoder for encoding inputted video data and an audio data encoder for encoding inputted audio data. Yoshida's system further includes a multiplexer for multiplexing the video data and the audio data, and a buffer for storing the multiplexed video data and audio data. A controller is responsive to the amount of data in the buffer to control various operations. See Yoshida at, for example, column 10, lines 24-30.

ARGUMENT

The references, whether considered separately or in combination, do not show or suggest the claimed invention. Thus, the references do not show or suggest a data transmission system in which an audio signal detector measures the audio level of the inputted audio data which leads to a multiplexer outputting a selected one of the video data, the audio data, and the multiplexed video and audio data.

The Office Action contends that Hayashi discloses a multiplexer controller which reads video and audio data stored in buffer memories and writes packet data of the read video

and audio data and associated control data into a memory. However, Hayashi's multiplexer controller reads video data and audio data from memories which make up the multiplexer.

At column 8, lines 10-20, Hayashi says, with reference to Figure 3:

> "A packet multiplex controller 46 reads the PES [packeted data] of the video data and audio data stored in the memories 42, 44 according to an encoding speed. It also give the PID [packet identification] attached to the PES of the video data and audio data to a PMT generating circuit 48. The PMT generating circuit 48 receives them and generates a PMT (Program Map Table). The PID attached to the PES of the video data and audio data of the service in question are described in the control data PMT. The packet multiplex controller 46 multiplexes by time-division and writes the PES of the read video data and audio data and their control data PMT to a memory 50."

As shown in Figure 3, packet multiplex controller 46, memories 42 and 44, and PMT generating circuit 48 make up multiplexer AVMX11. Thus, packet multiplexer controller 46 is controlling the multiplexer.

In contrast, in the claimed invention, the multiplexing controller controls the video data storage unit and audio data storage unit which supply video data and audio data to the multiplexer. Further, the multiplexing controller generates a data multiplexing control signal for controlling the multiplexer so as to cause the multiplexer to output a selected one of the video data, the audio data, and the multiplexed video and audio data. Such a multiplexing controller is neither shown nor suggested in the references.

In addition, as recognized in the Office Action, Yoshida monitors the amount of data accumulated in storage. In the claimed invention, the audio signal detector measures the audio level of the inputted audio data. The resulting audio detected signal determines whether the multiplexer outputs video data, audio data, or multiplexed video and audio data. See the specification at, for example, page 7, line 2 to page 8, line 14, page 9, line 21 to page

11, line 13, and page 11, line 20 to page 12, line 1. Attached is a copy of the definition of "audio level meter" from *Electronics Dictionary*, Fourth Edition, John Markus, Editor, McGraw-Hill Book Company, 1978. That definition reads: "An instrument that measures AF power with reference to a predetermined level. Its scale is usually calibrated in decibels." (Emphasis added.) Thus, the "audio level" relates to the power of the inputted audio data, not the amount of audio data.

CONCLUSION

In view of the foregoing, Applicant submits that claims 1-12, all the claims presently pending in the application, are patentably distinct over the prior art of record and are allowable, and that the application is in condition for allowance. Such action would be appreciated.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned attorney at the local telephone number listed below to discuss any other changes deemed necessary for allowance in a telephonic or personal interview.

To the extent necessary, Applicant petitions for an extension of time under 37 CFR §1.136. The Commissioner is authorized to charge any deficiency in fees, including

extension of time fees, or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date: March 15, 2005

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ABSTRACT OF THE DISCLOSURE

A data transmission system for cellular phones. A video data encoder encodes video data, and an audio data encoder encodes audio data. A video data storage unit stores encoded video data, and an audio data storage unit stores encoded audio data. A multiplexer multiplexes video data from the video data storage unit and audio data from the audio data storage unit. An audio signal detector measures the audio level of the inputted audio data and generates a data write control signal for controlling the video data encoder and the audio data encoder and an audio detected signal for controlling a multiplexing controller which generates a data read control signal for controlling the video data storage unit and the audio data storage unit and generates a data multiplexing control signal causing the multiplexer to output one of the video data, the audio data, and the multiplexed video and audio data.

ELECTRONICS DICTIONARY

Accurate, easy-to-understand, and up-to-date definitions for 17,090 terms used in solid-state electronics, computers, television, radio, medical electronics, industrial electronics, satellite communication, and military electronics

FOURTH EDITION

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A Doppler circuit or for the received ope from the pulses, iat can be amplified

Pertaining to signals, iat involve frequen- earing. 2. Slang for

ucy amplifier.
l AF] A frequency d by the human ear. ies extends approxi- Iz. Also called sonic icy.
An amplifier that e or transistor ampli- AF signal. In a super- the second detector after demodulation. fy the AF output of a magnetic tape re- source. Also called

c distortion Dis- ltiples of a single AF

input signal are generated by the amplifier.

audio-frequency oscillator An oscillator circuit that uses an electron tube, transistor, or other nonrotating device to produce an AF alternating current. Also called audio oscillator.

audio-frequency peak limiter A circuit used in an AF system to cut off signal peaks that exceed a predetermined value. Also called audio peak limiter.

audio frequency-shift keying [abbreviated AFSK] Radioteletype keying in which the RF carrier is transmitted continuously and pulses are transmitted by frequency-shifted tone modulation. Commonly used audio tones are 2.125 kHz for mark and 2.975 kHz for space.

audio frequency-shift modulation A facsimile system in which picture tones are represented by audio frequencies. In one example a 1.5-kHz tone represents black, a 2.3-kHz tone represents white, and frequencies in between represent shades of gray.

audio-frequency signal generator A signal generator that can be set to generate a sinusoidal AF signal voltage at any desired frequency in the audio spectrum. Also called audio signal generator.

audio-frequency transformer An iron-core transformer used for coupling between AF circuits. Also called audio transformer.

audiogram A graph that shows hearing loss, percent hearing loss, or percent hearing as a function of frequency.

audio level meter An instrument that measures AF power with reference to a predetermined level. Its scale is usually calibrated in decibels.

audiology 1. The science of hearing. 2. The branch of medicine dealing with causes and treatment of defective hearing.

audio masking *Masking.*

audiometer An instrument that measures hearing ability. In one form it consists of an audio oscillator that has variable calibrated output and is capable of generating a wide range of audio tone frequencies. Recorded speech sounds may also be used.

audiometry The study of hearing ability by audiometers.

audion The original three-element vacuum tube invented by Dr. Lee de Forest.

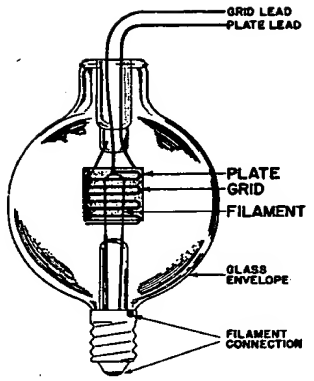
audio oscillator *Audio-frequency oscillator.*

audio peak limiter *Audio-frequency peak limiter.*

audiophile A person interested in listening to broadcasts and recordings that are reproduced with high fidelity.

audio response A form of computer output in which prerecorded spoken syllables, words, or messages are selected and put together by a computer as the appropriate verbal response to a keyboarded inquiry on a time-shared on-line information system.

audio response unit A magnetic recording system that provides voice response to an inquiry made from a typewriter or telephone-type terminal connected to a computer by a data-transmission line. The appropriate audio response is selected by the computer from spoken words previously recorded on a magnetic disk or other storage device. Applications include automatic stock-price-quotation service from any telephone when the query code for a particular stock is punched or dialed.



Audion-tube construction.

audio signal An electric signal that has an audio frequency.

audio signal generator *Audio-frequency signal generator.*

audio spectrum The continuous range of frequencies extending from the lowest to the highest audio frequency (from about 15 to 20,000 Hz).

audio subcarrier A subcarrier whose frequency lies within the audio range.

audio taper A taper commonly used in volume and tone controls, in which the resistance increases slowly at the beginning of shaft rotation and increases much faster as the shaft or knob is rotated toward the limit of its clockwise rotation. Used to compensate for the fact that the frequency range of the human ear is less at low volume levels.

audio transformer *Audio-frequency transformer.*

audiovisual Involving both sight and sound.

audition A preliminary studio test of a performer, act, or complete program for a television or radio show.

auditory perspective Three-dimensional realism of sound, as produced by an actual orchestra or a stereophonic sound system.

auditory sensation area The region enclosed by curves defining the thresholds of feeling and audibility as functions of frequency.

audit trail A data-processing system feature that permits tracing the flow of data step by step from input to output. Used primarily for locating the cause of an error in data processing.

FIG. 2